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[CONTINUED FROM PAGE 56.]

ENUMERATION OF THE NORTH AMERICAN CERCOSPORÆ.

WITH DESCRIPTIONS OF THE SPECIES.

BY J. B. ELLIS AND BENJAMIN M. EVERHART.

105. CERCOSPORA RETICULATA, Pk. 34th Rep. N. Y. State Mus., p. 47 (with figs.)

Spots large, irregular, brown. Hyhpæ amphigenous, short, tufted, nearly colorless. Conidia numerous, very variable in length, bacillary or subcylindrical, colorless. Conidia numerous, very variable in length bacillary or subcylindrical, colorless, 30—100 x 5—6 μ, with 3—7 septa.

The large spots sometimes occupy nearly half the leaf. They are dry and brittle. The pure white color of the fungus contrasts beautifully with the dark brown color of the spots. The conidia are usually more abundant along the veinlets than elsewhere, and thus give a reticulated appearance to the spots.

On leaves of *Solidago altissima*, Catskill Mts., N. Y., Aug., (Peck.)

106. CERCOSPORA GRISELLA, Pk. 33d Rep. N. Y. State Mus., p. 29.

"Spots suborbicular, indeterminate, yellowish. Hyphæ short, minutely tufted, septate. Conidia slightly thickened towards one end (below ?) or subfusiform, colorless, triseptate, 40—50 μ long. Living leaves of *Erigeron annuum*, July, N. Y. (Peck.) The tufts are so numerous and so minute as to give the under surface of the leaf the appearance of being suffused by a minute pruinosity."

Is this sufficiently distinct from *Cercospora cana* Sacc. ?

107. CERCOSPORA TOXICODENDRI, Ell. Am. Nat., Oct. 1882, p. 811.

Tufts snow white on black spots (1—2 mm). Hyphæ short, 25—30 x 5½ μ, pale brown. Conidia slender obclavate, faintly multiseptate, hyaline, attenuated above, 50—60 x 5—6 μ.

On leaves of *Rhus Toxicodendron*, Newfield, N. J. Not since found, and hence doubtful.

108. CERCOSPORA APOCYNI, E. & K. Bull. Tor. Bot. Club, XI, p. 121

Amphigenous, on small (1—3 mm.) brown spots with a narrow raised border; often occupying only a small (1 mm.) circular area on the brown spots, or sometimes several small white patches of conidia on the same spot. Hyphæ very short, 16—20 x 2.5 μ, tufted, hyaline, simple, entire. Conidia narrow-cylindric, 45—60 x 2.5 μ, granular and becoming faintly 3—4-septate.

The spots are at first purplish brown, with a purplish border, but become rusty brown except where whitened by the conidia.

On leaves of *Apocynum*, Aug., Kansas (Kellerman.)

C. Species standing ambiguously between CERCOSPORA and RAMULARIA.

(The species originally intended to be placed here will be included in the enumeration of the species of RAMULARIA.)

The following species were received too late for classification.

(109.) CERCOSPORA LEPIDII, Pk. 35th Rep. N. Y. State Mus.

Spots small, orbicular, grayish-brown or subcinereus, usually marked with faint concentric lines. Hyphæ amphigenous, about 35 μ long, single or two or three in a cluster, pallid. Conidia very long, tapering upwards, slightly constricted at the septa, eight to nine-septate, 150—200 μ long 20—25 μ wide in the widest part, greenish.

On living leaves of *Lepidium campestre*, May, N. J. (Peck.)

This is a very singular species. The fungus occurs on both sides of the leaf, but is more abundant on the upper side. The hyphæ are short and thick, and occasionally branched. The septa occur in the broad part of the spore, the upper part being much narrowed. Occasionally a cell is divided by a longitudinal septum.

(110.) CERCOSPORA DATURÆ, Pk. 35th Rep. N. Y. State Mus.

Spots suborbicular or irregular, varying in color from cinereus to reddish-brown, sometimes marked by irregular or flexuous elevated lines.

Hyphæ amphigenous, scarcely tufted, about equaling the length of the conidia, which are rather large, narrowed upwards, greenish, four to six-septate, 55—80 μ long, about 12 μ broad in the widest part.

On living leaves of *Datura stramonium*, June, N. Y. (Peck.)

(111.) CERCOSPORA LONGISPORA, Pk. 35th Rep. N. Y. State Mus.

Spots suborbicular, sometimes confluent and irregular, grayish-brown, the margin slightly darker. Hyphæ amphigenous, sometimes epiphyllous only, tufted, 20—40 μ long, colored. Conidia very long, variously curved or flexuous, colorless, simple or obscurely septate, sometimes forked, 60—170 μ long, about 4 μ broad.

On living leaves of *Lupinus perennis*, July, N. Y. (Peck.)

The species is apparently very distinct from *C. Lupini*, Cke., and is well marked by its densely tufted, black hyphæ and its very long, hyaline conidia.

(112.) CERCOSPORA VARIA, Pk. 35th Rep. N. Y. State Mus.

Spots suborbicular, sometimes large and irregular, reddish-brown, with a darker margin, reddish-gray beneath. Hyphæ few, hypophyllous, tufted, short, slightly colored. Conidia subcylindrical, one to five-septate, sometimes multinucleate, 40—70 μ long.

On living leaves of *Viburnum acerifolium*, July, N. Y. (Peck.)

A form of this species occurs on *Viburnum Lentago*. In it the spots are brown and the hyphæ are shorter. Doubtfully distinct from *C. tinea*, Sacc.

(113.) CERCOSPORA COMARI, Pk. 35th Rep. N. N. State Mus.

Amphigenous but more perfectly developed below. Hyphæ elongated, 150—200 x 3—4 μ, continuous or with an occasional septum, geniculate and bent above, reddish-brown, collected in little fascicles which appear under the lens like a thin, erect, brown pubescence. Conidia clavate, dark brown, about 5-septate, sometimes constricted at the septa, 40—60 x 6—8 μ. The fungus first appears in little brown patches (not on definine spots) which soon become darker and spreading, become confluent and blacken the greater part of the leaf.

On *Potentilla palustris*, New York (Peck.)

(114.) CERCOSPORA ALISMATIS, Ellis & Holway, n. s.

Spots indefinitely limited, brown, becoming whitish or gray in the center, of irregular shape, ½—1 cm. Hyphæ tufted, epiphyllous, dark brown, continuous. abruptly bent, subnodulose and subdentate above, 50—75 x 5—6 μ. Conidia hyaline, slender, gradually attenuated above, 5—9 septate 60—120 x 3—4 μ.

On *Alisma Plantago*, Decorah, Iowa, July (Holway.)

(115.) CERCOSPORA PERSONATA, (B. & C.) (*Cladosporium personatum* B. & C. Grev., III, p. 106.)

Forming small brown, orbicular spots (2—4 mm.) on the lower surface of the leaves. Hyphæ densely tufted, short, brown, continuous. Conidia mostly clavate, pale brown, about 3-septate, 30—50 x 5—6 μ. Originates beneath the epidermis.

On leaves of *Arachis hypogæa*, Carolina and Alabama (Ravenel.) According to Berkeley (l. c.), "a variety occurs on Cassia occidentalis which, amongst the usual threads has others which are slender, articulated, with longer oblong 1-septate spores,"

(116.) CERCOSPORA SIMULATA, Ellis & Everhart, n. s.

Hypophyllous, forming olive brown patches ½—1 cm. across. Tufts effused. Hyphæ fasciculate, dark brown, slender, undulate and crisped above, 150—200 x 3 μ, septate. Conidia oblong or clavate-oblong, brownish, about 3-septate, 20—45 x 4—5 μ. Has longer, darker hyphæ and shorter conidia than *C. olivacea* (B. & C.), and differs also from *C. effusa* (B. & C.)

On leaves of *Cassia Marylandica*, Pine Hills, Ills. (Earle.)

ALPHABETICAL LIST OF HOST-PLANTS.

(The reference after each name is to the serial number in the preceding descriptions.)

Abutilon Avicennæ (Cercospora althæina, Sacc.) 56.
Acalypha Virginica (C. Acalyphæ, Pk.) 10.
Alisma Plantago (C. Alismatis, Ell. & Hol.) 114.
Althæa rosea (C. althæina, Sacc.) 56.
Amorpha canescens (C. passaloroides, Winter) 73.
Ampelopsis quinquefolia (C. Ampelopsidis, Pk.) 98.
Amphicarpæa monoica (C. monoica Ell. & Hol.) 67.
Apios tuberosa (C. tuberosa, E. & K.) 54.
Apocynum (C. Apocyni, E. & K.) 108.
Arachis hypogæa (C. personata B. & C.) 115.
Aralia nudicaulis (C. leptosperma, Pk.) 53.
Asclepias Cornuti (C. Asclepiadis, Ell.) 8.
Asclepias incarnata (C. clavata, Gerard) 96.
Asclepias obtusifolia (C. clavata, Gerard) 96.
Baptisia (C. velutina, E. & K.) 82.
Beet leaves (C. beticola, Sacc.) 12.
Bœhmeria cylindrica (C. Bœhmeriæ, Pk.) 51.
Calla palustris (C. Callæ, Pk. & Clinton) 21.
Callicarpa (C. Callicarpæ, Cke.) 70.
Callirrhoe (C. althæina, Sacc.) 56.
Cassia obtusifolia (C. nigricans, Cke.) 84.
Cassia Marylandica (C. simulata E. & E.) 116.
Cassia occidentalis (C. occidentalis, Cke.) 74.
Caulophyllum thalictroides (C. Caulophylli, Pk.) 62.
Celery—cultivated (C. Apii, Fres.) 50.
Cephalanthus occidentalis (C. Cephalanthi, E. & K.) 24.
Cercis Canadensis (C. cercidicola, Ell.) 49, (C. chionea, E. & K.,) 102.
Chenopodium album (C. Chenopodii, Fres.) 4.
Clematis (C. rubigo, Cke. & Hark.) 64.
Clematis Virginiana (C. squalidula, Pk.) 63.
Crotalaria sagittalis (C. Demetrioniana, Wint.) 40.

Croton glandulosum (C. crotonifolia, Cke.) 16.
Datura stamonium (C. Daturæ, Pk.) 110.
Desmodium acuminatum (C. Desmodii, E. & K.) 75.
Dianthera Americana (Diantheræ, E. & K.) 2
Diodia teres (C. Diodeæ, Cke.) 41.
Dioscorea villosa (C. Dioscoreæ, E. & M.) 94.
Diospyros Virginiana (C. Diospyri, Thuem.) 81.
Dipsacus sylvestris (C. elongata, Pk.) 55.
Dipteracanthus ciliosus (C. consociata, Winter) 87.
Echinocystis lobata (C. Echinocystis, E. & M.) 65.
Elm (?) leaves (C. sphæriæformis, Cke.) 77.
Epilobium alpinum (C. Epilobii, Schn.) 79.
Erigeron (C. cana, Sacc.) 95.
Erigeron annuum (C. grisella, Pk.) 106.
Eriogonum tomentosum (C. rubella, Cke.) 23.
Euonymus Americanus (C. Euonymi, Ell.) 7.
Euonymus Europæus (C. Euonymi, Ell.) 7.
Eupatorium album (C. Eupatorii, Pk.) 45.
Galium Aparine (C. Galii, Ell. & Hol.) 58.
Garrya elliptica (C. Garryæ, Hark.) 61.
Gleditschia triacanthos (C. olivacea, B. & Rav.) 85.
Gnaphalium (C. Gnaphalii, Harkness) 68.
Gossypium (C. gossypina, Cke.) 69.
Gymnocarpus (C. inquinans, Cke.) 47.
Gymnocladus Canadensis (C. Gymnocladi, E. & K.) 25.
Heteromeles arbutifolia (C. Heteromeles, Hk.) 29.
Heuchera Americana (C. Heucheræ, E. & M.) 38.
Ilex glabra (C. Ilicis, Ell.) 32.
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Isanthus cœruleus (C. Isanthi, E. & K.) 15.
Kalmia latifolia (C. sparsa, Cke.) 76.
Lepidium campestre (C. Lepidii, Pk.) 109,
Lobelia cardinalis (C effusa, B. & C.) 89.
Lobelia syphilitica (C. effusa, B. & C.) 89.
Lonicera flava (C. antipus, Ell. & Hol.) 13.
Liriodendron Tulipifera (C. Liriodendri, Ell. & Hark.) 52.
Lupinus diffusus (C. Lupini, Cke.) 99.
Lupinus perennis (C. filispora, Pk.) 46, (C. longispora, Pk.) 111.
Magnolia glauca (C. Magnoliæ, Ell. & Hark.) 44.
Morus rubra (C. moricola, Cke.) 36.
Nymphæa odorata (C. nymphæacea, C. & E.) 22.
Passiflora lutea (C. fusco-virens, Sacc.) 91.
Pastinaca (C. Apii, Fres.) 50.
Peach leaves (C. persica, Sacc.) 104.
Persea palustris (C. purpurea, Cke.) 37.
Pentstemon cobæa (C. Pentstemonis, E. & K.) 31.

Pentstemon grandiflora (C. Pentstemonis, E. & K.) 31.
Phaseolus (C. Phaseolorum, Cke.) 97.
Phaseolus—cultivated (C. canescens, E. & M.) 18.
Phlox divaricata (C. omphakodes, Ell. & Hol.) 26.
Physalis (C. Physalidis, Ell.) 6.
Phytolacca decandra (C. flagellaris, E. & M.) 1.
Plantago lanceolata (C. Plantaginis, Sacc.) 5.
Plantago major (C. Plantaginis, Sacc.) 5.
Polygala cruciata (C. grisea, C. & E.) 86.
Polygala lutea (C. grisea, C. & E.) 86.
Polygonum (C. Polygonorum, Cke.) 83.
Polygonum Convolvulus (C. polygonacea, E. & E.) 30.
Potentilla palustris (C. Comari, Pk.) 113.
Prunus serotina (C. circumscissa, Sacc.) 27.
Pyrus arbutifolia (C. Pyri, Farlow) 92.
Quercus virens (C. polytricha, Cke.) 101.
Rafinesquia Californica (C. Rafinesquiæ, Hark.) 80.
Ranunculus repens (C. Ranunculi, Ell. & Hol.) 72.
Rhamnus (C. ærugniosa, Cke.) 57.
Rhus copallina (C. rhuina, C. & E.) 34.
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Rhus Toxicodendron (C. Toxicodendri, Ell.) 107.
Reseda odorata (C. Resedæ, Fuckl.) 17.
Rose leaves (C. rosæcola, Pass.) 42.
Rumex acetosella (C. acetosella, Ell.) 93.
Sambucus Canadensis (C. depazeoides, Sacc.) 35.
Sanguinaria Canadensis (C. Sanguinariæ, Pk.) 71.
Smilax (C. Smilacis, Thuem.) 33.
Solanum Dulcamara (C. Dulcamaræ, Pk.) 100 *a*.
Solidago altissima (C. reticulata, Pk.) 105.
Symplocarpus fœtidus (C. Symplocarpi, Pk.) 48.
Teucrium Canadense (C. racemosa, E.& M.) 100,(C. Teucrii, E. & K.) 9.
Tilia Americana (C. microsora, Sacc.) 43.
Trifolium agrarium (C. zebrina, Pass.) 60.
Vernonia Baldwinii (C. oculata, E. & K.) 20, (C. Vernoniæ, E.& K.) 19.
Viburnum acerifolium (C. varia, Pk.) 112.
Viburnum Lentago (C. varia, Pk. forma) 112.
Vicia sativa (C. Viciæ, Ell. & Hol.) 59.
Viola cucullata (C. granuliformis, Ell. & Hol. 66, (C. murina, E. & K.) 90.
Violet (C. Violæ, Sacc.) 3.
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SYLLOGE--VOLUME III.

Saccardo—Sylloge Fungorum omnium hucusque cognitorum, Vol. III, *Sphæropsideæ*, *Melanconieæ*, has at length appeared. The volume of 860 pages contains descriptions of 4,212 species, divided into 165 genera, of which *Phoma* embraces 632 species: *Septoria*, 581; Phyllosticta, 345; Diplodia, 264. As in the two preceding volumes, the fundamental principle of classification is based on the color, shape and septation of the spores. The application of the carpological system of classification to these families of fungi does not appear to have broken up and disarranged the old established genera to so great an extent as in the *Pyrenomycetes*, though various changes of more or less importance are to be noted. For instance, the *Hendersonias* with hyaline spores are made to constitute a new genus, *Staganospora*, *Sacc.*, separated from *Hendersonia* by six intervening genera.

Sphæronema, in the family *Sphæroideæ*, is made to include only those species with membranaceous, coriaceous or carbonaceous perithecia and ovoid or oblong, continuous, subhyaline spores, while those with very thin, soft, membranous, bright-colored perithecia, with ellopsoid, continuous, hyaline spores, are placed in a new genus, *Sphæronemella*, Sacc., belonging to another family. *Nectroideæ*, Sacc., and those with conic or spiniform, black perithecia and filifusoid, continuous, hyaline spores, make the genus *Sphærographium*, Sacc., and those with perithecia bulbous at the base or equal, round or subclavate and spores fusoid-bacillary, generally falcate, septate, hyaline or yellowish, make the genus *Cornularia* (*Karst.*)

On page 442 we find *Lichenopsis sphæroboloidea*, Schw. This was doubtless an oversight, as this is now known to be an ascigerous fungus, with long, filiform, multiseptate spores, and the reproduction of the original description of Schweinitz in this place without comment would be apt to mislead. The true character of this fungus is given in Grevillea, IV, p. 7, and specimens have been distributed in the North American Fungi, No. 453. It is announced that Vol. IV of the Sylloge will contain the *Hyphomycetes*, and will appear before the end of 1885, and also that the *Sylloge Hymenomycetum* now being prepared by Prof. Saccardo and Prof. Jos. Cuboni will appear, at least the first part, this year.

The Sylloge is certainly a very valuable work, and may be considered almost a necessity for all who aspire to a thorough knowledge of the fungi. Of course, if the author could have given us a thorough re elaboration of the species, in this and the preceding volumes, showing which were worthy to stand and which were to be rejected, or reduced to synonyms, the work would have been still more valuable; but this was not the original scope of the undertaking, and would have required an amount of time and careful research (if carried through all the orders of fungi) for which a single lifetime would hardly suffice, and we are glad Professor Saccardo has been able to give us the Sylloge, even such as it is, and hope he may meet with such support as may enable him to go on and finish up the work.

J. B. E.

Newfield, N. J., Feb. 11, 1885.

ON RAMULARIA OBOVATA, FCKL.,

Sym. Mycol. p. 103.

BY J. B. ELLIS AND BENJAMIN M. EVERHART.

The specimens of this species distributed in the NORTH AMERICAN FUNGI afford the following characters:

Spots orbicular, 2—8 mm., reddish brown with a dirty white center and a darker colored, narrow, sometimes slightly raised border, around which the leaf is at first purplish. Hyphæ amphigenous but mostly hypophyllous fasciculate, hyaline, continuous, very rarely with 1—2 septa, nearly straight, but often undulate, subdenticulate above, 70—125 x 3—4 μ. Conidia terminal, obovate, granular, without septa, 18—25 x 8—11 μ.

Specimens of *R. obovata*, Fckl. in Rabh. Winters' Fungi Europæi, agree well with the above description, but specimens collected on *Rumex crispus*, in Ohio, by Dr. W. A. Kellerman, June, 1883, and which at the time were referred to this species, differ in several particulars. The spots are larger and of a dirty gray color, without any white center. The hyphæ are shorter (40—60 μ) and not undulate, and the conidia vary from oblong-clavate to cylindrical, and are, as a rule, uniseptate, occasionally 2—3 septate. Cylindrical is the prevailing form, slightly constricted at the septum, agreeing, in fact, very well with those of specimens on *Rumex* collected at Wood's Holl, Mass., by Dr. W. G. Farlow, and mentioned by him in Bulletin of the Bussey Inst., 1877, pp. 236 and 237, and in Proc. Am. Acad. 1878, p. 262, as probably referable to *Ramularia obovata*, Fckl., or *R. macrospora*, Fres., of which the first mentioned species is there regarded as a probable synonym. In preparing the list of *Ramularias*, we have found among our European specimens only one fruitful specimen of *R. obovata*, Fckl., viz., the one in Fung. Eur. already referred to. The specimen in Mycotheca Marchica, no. 493, afforded us neither hyphæ nor conidia, and on two specimens from Von Thuemen we could find no conidia. We find, however, in Hedwigia, June, 1883, a paper by Professor C. A. J. A. Oudemans on the "Identity of *Oidium monosporium*, West., *Peronospora obliqua*, Cke., and *Ramularia obovata*, Fckl.," in which the Professor states that he has examined specimens of *R. obavata*, Fckl., distributed under different names in various European collections, viz., Fckl.'s Fungi, Rhenani, Cooke's British Fungi and Saccardo's Mycotheca Veneta, and finds them all agreeing with the description given by Fuckel of his *Ramularia obovata*, the obovate 20—25 x 10—12 μ conidia being constantly without septa and borne on generally simple and continuous undulate hyphæ. Prof. Oudemans also states that he examined fresh, living specimens and found them all to agree with the dried specimens and with the description of the species in question given by Fuckel. The constant invariability of the European specimens would

lead to the suspicion that there may be some error in the conclusions arrived at by Dr. Farlow in referring to *R. obovata*, Fckl., the Massachusetts specimens on *Rumex*, investigated by him and having the "mature spores long and narrow with 1—3 septa." We must either suppose that *R. obovata*, Fckl., is more variable in this country than in Europe, or that two species have been confounded. The latter appears to us the more reasonable conclusion, which is further strengthed by the fact that in examining the material furnished by Dr. Farlow (for N. A. F. no. 220), of which a part is still in our hands, one leaf was found agreeing in all respects with the Ohio specimens, while all the others afforded only the obovate spores without septa. As a further confirmation of the correctness of this conclusion is the fact that on the specimen in Rabh.-Winter's, F. Eur., no. 2885, one of the obovate spores was seen in a state of germination, but still without any trace of a septum.

Considering it, then, highly probable, and in fact almost certain, that the Ohio *Ramularia* is not the *R. obovata* described by Fuckel and distributed in the various European Exsiccati referred to, we have still to consider whether, as Dr. Farlow has suggested in the papers already mentioned, this is really a form of *R. macrospora*, Fres. The fact that the fungus described by Fresenius under the name of *Ramularia macrospora* was found on a species of *Campanula* would lead us to suspect that our fungus on *Rumex* might be different. In *R. macrospora*, Fres., the hyphæ are, according to that author, 1—2 septate below and the conidia *generally* not septate, while in the Ohio specimens the hyphæ are, so far as we can see, without septa, and the conidia, *as a rule*, 1-septate. Whether the conidia are concatenate we are uncertain, but the fact that they show the scar marking the point of attachment only at one end, would indicate that they are not, though two or three conidia were seen with a knob at one end which might indicate either the formation of a second spore or the commencement of germination. Fresenius does not say whether his *R. macrospora* is on spots but Saccardo, in his Fungi Italici 1003 thus figures it, though the hyphæ in his figure are without septa. Unfortunately we have no authentic specimen of *Ramularia macrospora*, Fres., to enable us to decide the matter definitely, and meanwhile we here characterize the Ohio specimens under a separate name, as follows:

RAMULARIA DECIPIENS, E. & E.

Spots orbicular, gray, ¼—½ cm., with a darker colored, narrow, raised border. Tufts amphigenous, scattered, whitish. Hyphæ fasciculate, issuing in dense clusters through the stomata of the leaf, hyaline, continuous, nearly straight, entire or subdenticulate above, 30—50 x 3 μ. Conidia clavate-oblong or simply oblong or more commonly cylindrical, 1-septate and mostly slightly constricted at the septum, exceptionally 2 or 3-septate, 15—35 x 6—8 μ, ends obtusely rounded.

On leaves of *Rumex crispus*, Fairfield Co., Ohio, June 1883 (Kellerman.

NEW LITERATURE.

BY W. A. KELLERMAN.

HARKNESS, H. W. "Fungi of the Pacific Coast;" in Bulletin of the California Academy of Sciences, Feb. 1885.

Of the long list of species the following are described as new: Polyplocium Californicum, Hk.; Lycoperdon sculptum, Hk.; Septogleum defolians, Hk., on Quercus Kelloggii; Sorosporium Californicum, Hk., in heads of Grindelia; Dicranidion fragile, Hk., on decaying Nerium Oleander; Chalara setosa, Hk., on dead leaves of Quercus densiflora; Cercospora glomerata, Hk., on living leaves of Garrya elliptica; Tetraploa scabra, Hk., on Scirpus; Plowrightia phyllogona, Hk., on leaves of Amelanchier alnifolia; and Geopora Cooperi, Hk. Two new genera are diagnosed as follows:

DICRANIDION, Hk. (Etym. *Dikranos*, a fork.)—Acervuli pale, scattered. Spores hyaline, septate, shaped like a tuning-fork, attached by the closed extremity to short branching hyphæ.

D. FRAGILE, Hk.—Acervuli, rosy-white, minute, scattered; spores hyaline, 4-septate, shaped like a tuning-fork, attached by the closed extremity, easily separating, each arm dividing near the centre and near the base, forming one rounded and four oblong segments; length of spore 12—16; width of arm 4—5 μ. On decaying *Nereum Oleander*, Feb. Cal. In appearance much like *Fusarium*.

GEOPORA, Hk. (Etym. *Ge*, the earth, and *opora*, Autumn fruits.) Subterranean. Integument woolly, continuous with the trama. Hymenium convolute. Asci cylindrical. Sporidia hyaline, oblong, smooth.

G. COOPERI, Hk.—Irregularly globular, 2—4 cm. in diameter, covered with dense brown wool, which is continued inwards on the trama; absorbing base none; hymenium white, not closely packed; asci cylindrical, 8-spored, 220 x 26 μ; sporidia hyaline, oblong, smooth, with a large, shining excentric, nucleus, 28 x 20 μ. Belonging to the Tuberacei, allied to *Hydnotrya*, but sporidia oblong and smooth.

KELLERMAN, W. A.—"A Partial List of the Kansas Parasitic Fungi, together with their Host-plants;" presented to the Kansas Academy of Science, Nov. 25, 1884, and reprinted in Bull. Wash. Coll. Laboratory of Nat. Hist., p. 72.

The species were collected in 1883 and 1884, numbering about one hundred and eighty. No descriptions are given (except of Septoria Kellermaniana, Thuem. n. s. Sporis bacillaribus, rectis, tenuissimus, simplicibus, vel vix visible septatus, 60—80 x 1.5 μ.) A list of the host plants is given, arranged alphabetically. The genera most numerously represented are Puccinia with nineteen species, Septoria with nineteen, Phyllosticta with thirteen, Cercospora with thirty-three, and Ramularia with eight species. Puccinia Malvacearum, Mont., is here reported from the Arkansas Valley, as occurring on Malvastrum coccineum. According to Mr. Arthur (see p. 27) it had not been reported in the United States.

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